

Amendments to the Drawings:

Please substitute the replacement drawing sheets attached as Exhibit A and containing Figure 1-4 for the original drawing sheets containing Figures 1-4.

Attachment: Two sheets of drawings (Exhibit A)

REMARKS

I. INTRODUCTION

Applicant thanks the Examiner for the indication of allowable subject matter in claims 3-10. Applicant has added new claims 11-18. Accordingly, claims 1-18 are presently pending in this application. Applicant respectfully requests reconsideration of the application in view of the foregoing amendments and the following arguments.

II. NEW CLAIMS 11-18

Applicant has added new claim 11 which recites that “none of said plurality of differential gears and said first and second side gears are disposed within a differential case.” Support for this amendment can be found throughout the specification and drawings including in paragraphs 0003, 0007 and 0034. Accordingly Applicant submits that this claim does not add any new matter. Applicants have also added new claim 12 which recites that “a gap in said retaining ring is aligned with one of said flats in said radially outer portion of said at least one arm.” Support for this claim can be found throughout the specification and drawings including in paragraph 0023. New claims 13-18 are substantially similar to the claim set comprised of original claims 6 to 10 and new claim 12, but recite that the “radially outer portion” of the arm includes “a flat”. Support for these claims can again be found throughout the specification and drawings.

III. AMENDMENT TO THE DRAWINGS

Applicant has submitted two sheets of replacement drawings. The sheets of drawings do not involve substantive changes, but rather relate to the replacement of the informal drawings originally filed with the application with formal drawings conforming to the requirements of 37 C.F.R. § 1.84.

IV. REJECTION OF CLAIMS 1-2 UNDER 35 U.S.C. § 102(B)

Claims 1-2 stand rejected under 35 U.S.C. § 102(b) as anticipated by Burgman et al. (U.S. Patent No. 5,545,102). Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Orr et al. (U.S. Patent No. 6,645,113). Applicant respectfully submits that the rejections of claims 1-2 under 35 U.S.C. § 102(b) are improper because neither reference discloses or suggest all of the limitations recited in the claims as amended. In re Paulsen, 30 F.3d 1475, 1478-79, 31 U.S.P.Q.2d 1671 (Fed. Cir. 1994); Verdegaal Bros. v. Union Oil Co. of California, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1997) (“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”).

Independent claim 1 recites “[a]n inter-axle differential” including “an input shaft disposed about a first axis” and “an output shaft coaxial with said input shaft”. Applicants respectfully submit that neither Burgman et al. nor Orr et al. disclose a differential meeting the above-identified limitations.

Burgman et al. and Orr et al. each disclose *wheel* differentials as opposed to inter-axle differentials. As a result, an input shaft drives a ring gear coupled to a differential case which in turn rotates the spider and differential gears and drives the output or axle shafts. The input shaft and axle shafts, however, are substantially perpendicular and accordingly, neither Burgman et al. nor Orr et al. disclose an output shaft that is “coaxial with said input shaft” as recited in independent claim 1. The differences between inter-axle differential and wheel differentials are noteworthy and result in different design considerations rendering Burgman et al. and Orr et al. inappropriate as references. In particular, the loading and torque transfer on the spider in an inter-axle differential occurs

at the center of the spider through the spider's coupling with the input shaft while the loading and torque transfer on the spider in a wheel differential occurs at the outside of the spider arms through the connection of the spider to the differential case and ring gear. The use of the ring gear in wheel differentials also invariably requires the use of a differential case for mounting of the ring gear and the differential case is the very element which Applicant sought to eliminate in the inter-axle differential.

Because Burgman et al. and Orr et al. do not disclose or suggest an inter-axle differential meeting all of the limitations recited in independent claim 1, Applicant submits that the rejections of claim 1 under 35 U.S.C. § 102(b) is improper. Further, because claim 2 depends from independent claim 1, Applicant submits that the rejection of claim 2 under 35 U.S.C. § 102(b) is also improper and requests that the rejection be withdrawn.

V. CONCLUSION

For the above cited reasons, all of the claims presently pending in this application are believed to be allowable. If the Examiner has any further questions or concerns, the Examiner is invited to contact the Applicant's undersigned attorney.

Respectfully submitted,



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